




# Joint Expo 2007

Disaster Preparedness

Wednesday, February 8, 2007

Lansing Center



A photograph of a space shuttle in orbit above Earth. The shuttle is on the left, with its white thermal blankets and various instruments visible. The Earth's surface below is a mix of blue oceans and white clouds, with a distinct dark blue area that appears to be a large body of water or a specific oceanic feature.

**Bob Babcock**  
**Security and Emergency Response**  
**Coordinator**

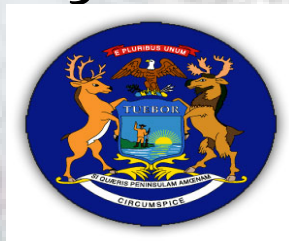


State of Michigan  
Department of  
Environmental Quality

Contact Info:  
**1-517-373-8566**  
**[babcockr@mi.gov](mailto:babcockr@mi.gov)**

# Thank You

- Michigan Section - American Water Works Association (AWWA) and Michigan Water Environment Association (MWEA) for their long term commitment to stewardship of the water environment
- The people of Michigan for supporting well planned emergency activities.





# Why disaster preparedness?



# disaster

- Disaster:
  - an event causing great loss or misfortune
  - An occurrence causing widespread destruction and distress
  - A catastrophe
  - A grave misfortune



# Preparedness

- State of readiness
- Possession of adequate armed forces, industrial resources and potential, especially as a deterrent to an enemy attack



# Preparedness-past, present, future

- NIMS compliance, ICS, DHS/FEMA, bootstraps, 6 P's, you play like you practice; TTX's; protect people; protect revenues; utility first responders; all hazards; natural; unnatural; CBRNE; cyber; population; pandemic; CIP3
- The raison d'être...the reason for being



# Three Tough Questions

- If not you, who ?
- If not now, when ?
- Your bootstraps...who pulls them up?





6 P's

- Proper prior  
planning  
prevents poor  
performance



# Plans

- "All plans are good...until the first shot is fired" – military maxim

# Plans

- "everyone has a plan...until they're hit" - Mike Tyson



# Semper Paratus

- US Coast Guard motto...always prepared
- US Coast Guard Admiral Thad W. Allen – Hurricane Katrina brief



[www.KatrinaDestruction.com](http://www.KatrinaDestruction.com)



# National Structure



# FEMA: Federal Emergency Management Agency

- DHS grant money will be assigned by regions = 8 Mich. State Police districts
- Utilities need to be NIMS compliant
- NIMS = National Incident Management System
- ICS = Incident Command Systems
- NRP = National Response Plan





# NIMS

- National Incident Management System
- Applicable to all hazards
- In the event of an incident, you need a management system to assist appropriate response
- NIMS:
  - FLOPAI: finance, logistics, operations, planning, administration, investigation



# NIMS

- The long-term goal of NIMS is to provide state, territorial, local, and tribal jurisdictions with a **consistent operational framework** for all aspects of incident management. This framework should be **sustainable, flexible, and scalable** to meet changing incident needs and allow for integration of other resources from various partners through mutual aid agreements.



# National Incident Management System (NIMS)



FEMA

- Foundation for our prevention, preparedness, response, and recovery strategies
- FY07 NIMS requirements to receive FY08 emergency preparedness grants
- All jurisdictions must comply with specific performance-based metrics.





# NIMS

- Homeland Security Presidential Directive 5 "Management of Domestic Incidents" required that states, territories, local jurisdictions and tribal entities adopt the National Incident Management System (NIMS).



# Are You NIMS Compliant?

- By September 30, 2007, jurisdictions will be required to comply with the FY07 NIMS requirements to receive FY08 emergency preparedness grants.



# ICS Compliant First Responder

- In order to be a NIMS compliant on-scene first responder, and, potentially be reimbursed by DHS/FEMA, the utility worker needs to have completed, at a minimum, ICS 100 and ICS 700 Internet web-based training





# DHS/FEMA

To: All Governors

From: Federal Emergency Management Agency

Date: October 23, 2006

Dear Governor (last name):

The purpose of this letter is to provide you and your staff with information on the National Incident Management System (NIMS) Fiscal Year (FY) 2007 compliance requirements. The NIMS is our nation's incident management system, and implementation of NIMS among all jurisdictions and all levels of government must be achieved as quickly as possible to ensure the security of our homeland.



# NIMS FY 07 Compliance

- Completion of ICS-100 by:
  - Entry level first responders and disaster workers
  - First Line Supervisors
  - Middle management
  - Command and general staff
- Completion of ICS 200 by:
  - First line Supervisors
  - Middle management
  - Command and general staff



# NIMS FY 07 Compliance

- **FY07 Compliance Activities Required Compliance Actions Specific Areas of Measure Guidance and Technical Assistance Resources Bold = "Tier 1"**
- Complete IS-700 NIMS: An Introduction.
- **Completion of IS-700 by:**
- **Entry level first responders and disaster workers**
- **First line supervisors**
- **Middle management**
- **Command and general staff**
- All personnel with a direct role in emergency preparedness, incident management or response must complete this training.





# NIMS FY 07 Compliance Matrix

- NIMS Implementation Matrix for States and Territories (October 1, 2006 – September 30, 2007)
- url:  
[http://www.fema.gov/emergency/nims/nims\\_compliance.shtm](http://www.fema.gov/emergency/nims/nims_compliance.shtm)  
– Click on FY 07 link



# INCIDENT COMMAND SYSTEM



FEMA

- Standardized
- Can be applied to a wide variety of emergencies
- Basic features
  - Common terminology in 'plain talk'
  - Modular organization (easy to grow or shrink)
  - Management by objectives
  - Reliance on an Incident Action Plan
  - Chain of Command
  - Unified Command
  - Manageable span of control
- *Key to efficient operation and good communication flow*



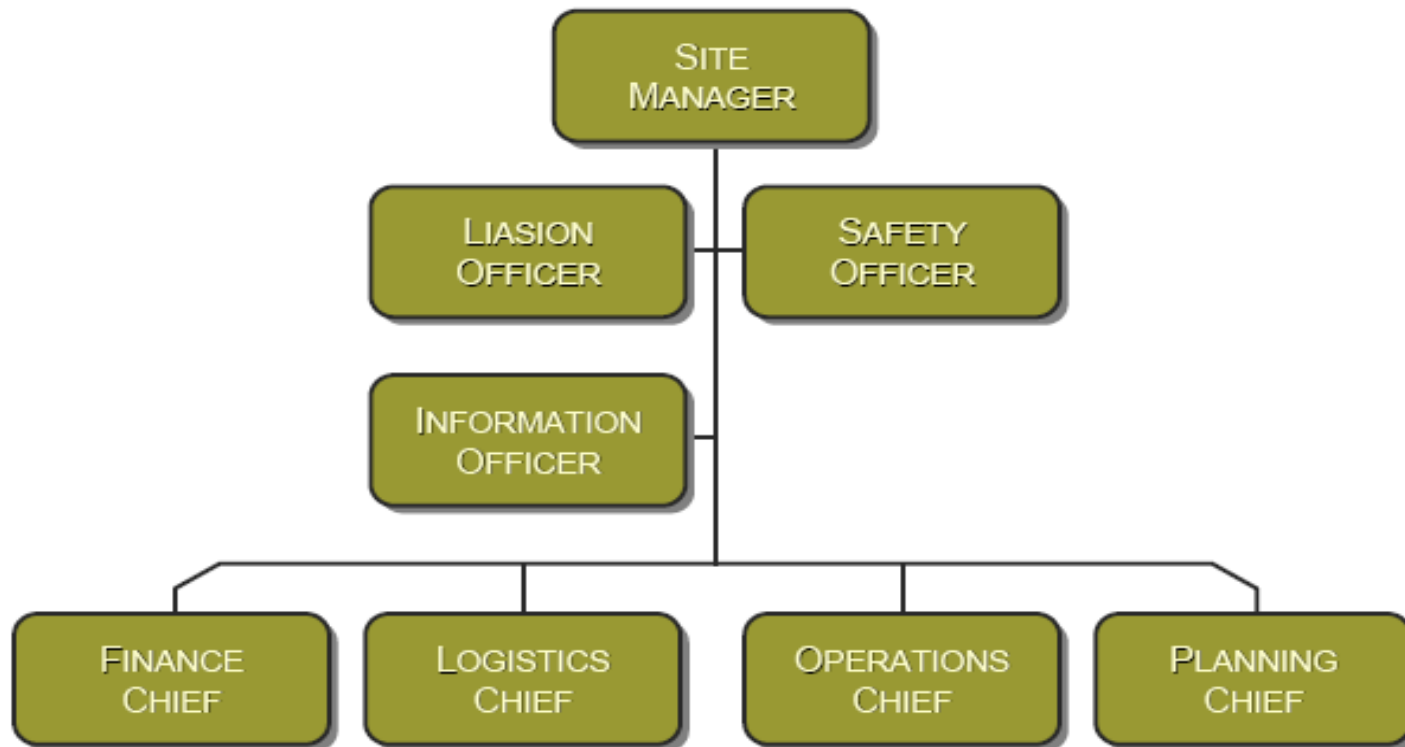
# ICS

- Each person has a *specific and limited job*
- Each person *reports to only one designated person*
- Each supervisor has a specific and limited number of positions reporting them





# COMMAND OPERATIONAL STRUCTURE



# FLOPAI

- Financing
- Logistics
- Operations
- Planning
- Administration
- Investigation



# All Hazards

- Natural
  - Ice storms, power outages, tornadoes, floods
- Unnatural
  - Malevolent acts...6 modes of terrorism
    - CBRNE and cyber
      - Chemical, biological, radioactive, nuclear, explosive and cyber





# Prepared for all hazards

- Natural Incidents
- C HEMICAL
- B IOLIGICAL
- R ADIOLOGICAL
- N UCLEAR
- E XPLOSIVE
- CYBER



# ICE STORM



# TORNADO





# FLOODING



© bryanmaxx.net/firms

Photo by Major Mike Chaffin

# CHEMICAL



**BIOLOGICAL**





# RADIOLOGICAL



# EXPLOSIVE





NUCLEAR



# CYBER

## WARNING!

The system is either busy or has become unstable. You can wait and see if it becomes available again, or you can restart your computer.

- \* Press any key to return to Windows and wait.
- \* Press CTRL+ALT+DEL again to restart your computer. You will lose unsaved information in any programs that are running.

Press any key to continue \_

# Motivation

- “Protect people and profits”

GM

- “You play like you practice”

GM



# Greatest Medical Milestone since 1840...British Medical Journal

- Improved sewage disposal and clean water supply systems, which have reduced diseases such as cholera, was the overwhelming favorite of 11,341 people worldwide who voted in a 2006 survey conducted by the British Medical Journal.



# Water Security Summary

- our greatest strength is our greatest weakness...our success
- more people...what kind
- Flu pandemic
- 9 elements of a security program
- TTXs: tabletop exercises
- use emergency response plan to train EOC, first responders – police, fire departments
- 800 mhz radios in lieu of phones



# Water Security Summary (cont'd)

- isolate/contain/investigate/remediate if toxicity
- Wwtp – if toxicity, contact wtp
- reverse 911 to call public
- civil support teams for WMD
- FEMA NIMS 100 & 700 compliant
  - FLOPAI acronym
- MDEQ Water Bureau Initiatives
- TANS: MDEQ Threat Email List





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## Emergency Response for Releases to Water

Introduction to the Part 5 Rules - Spillage of Oil and Polluting Materials.



- > [Emergency Response Part 5 Presentation](#)
- > [Slug Discharges Presentation](#)

### Emergency Response Announcements

- **21 Dec 05:** DHS chemical plant regulation bill introduced. > [View Story](#)

## Information

- [Reporting Releases Per Part 5 Rules](#) [PDF](#)
- [EPA's Emergency Response Tabletop Exercises for Drinking Water and Wastewater Systems](#)
- [Water Bureau Part 5 Rules/PIPP Staff](#) [PDF](#)
- [Part 5 Rules Guidance Documents](#)
- [Emergency Response Photo Gallery](#)

## Downloads

- [Options for Minimizing Environmental Impacts of Freshwater Spill Response](#) [PDF](#)
- [WMD Civilian Support Team Presentation, MAJ Awadi](#) [PDF](#)
- [Spill or Release Report Form \(EOR2465\) in PDF Format](#) [PDF](#)

## Laws & Rules

- [Section 3115 of Part 31, Reporting](#) [PDF](#)
- [Section 3111b of Part 31, 911 and Local Health Dept. notification](#) [PDF](#)
- [Part 31 of Act 451 \(MDEA\)](#) [PDF](#)

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Due to terrorist attacks on September 11, 2001, and recent federal legislation and state authorizations, the Michigan Department of Environmental Quality (MDEQ), Water Bureau (WB), actively participates in numerous Infrastructure Security Program activities. The federal Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Bioterrorism Act) requires drinking water systems to comply with requirements by certain dates as a part of the nation's homeland security efforts. Read more and view recent Powerpoint Presentations.

> [More](#) **Information**

- [8 Requirements of Bioterrorism Act](#)
- [EPA Security Guidance for Drinking Water Facilities](#)
- [Easy-to-read Summary of the Bioterrorism Act of 2002](#)
- [Homeland Security Presidential Directives \(HSPD\) Index](#)
- [Instructions on sending your VA/ERP to EPA](#)
- [MI FOIA Water Security Information Policy](#)
- [National Alert Status - Department of Homeland Security](#)
- [Safe Drinking Water Act Felony](#)
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## Threat Advisory Notification System [TANS] Index

TANS (Threat Advisory Notification System) is a controlled email distribution system, maintained by the Michigan DEQ Security Coordinator, and is utilized to periodically distribute security documents pertaining to water and wastewater systems and installations. Note: Many of the attachments can not be posted publicly due to For Official Use Only status.

For TANS mailing list additions, removals, and revisions, please contact Laura Smith ([smithla3@mi.gov](mailto:smithla3@mi.gov)) via email.

Listed below are the TANS notices sent to date.

1. [TANS #1](#) To advise Michigan Public Water and Wastewater Officials Of National Threat Level Coverage, December 22nd, 2003
2. [TANS #2](#) To forward USEPA Water and Wastewater Guidance, December 29th, 2003
3. [TANS #3](#) To advise Michigan Public Water and Wastewater Officials of National Threat Level Change, January 9th, 2004
4. [TANS #4](#) - [Emergency Preparedness Guide](#) To forward FEMA Fire and Fire and Emergency Services Preparedness Guide for the Homeland Security Advisory System, February 4th, 2004
5. [TANS #5](#) To forward the Internet Web Address for the National Defense University Poster Entitled "Coping with an Attack: A Quick Guide to Dealing with Biological, Chemical, and "Dirty Bomb" attacks"; and to forward joint DHS-FBI informational bulletin entitled "Potential Threats to Great Lakes Area" Dated 3/19/04, March 19th, 2004

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## Homeland Security Presidential Directives (HSPD) Index

Homeland Security Presidential Directives record and communicate presidential decisions about the homeland security policies of the United States. The following directives provide guidance or outline framework for public water system security.

- [HSPD #5 Management of Domestic Incidents](#), February 28th, 2003
- [HSPD #7 Critical Infrastructure Identification, Prioritization, and Protection](#), December 17th, 2003
- [HSPD #8 National Preparedness](#), December 17th, 2003
- [HSPD #9 Defense of United States Agriculture and Food](#), January 30th, 2004

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## Related Content

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- National Alert Status - Department of Homeland Security



# Todd Beamer



# "Let's Roll!"

- Nobody knows the courage, importance and impact of the sacrifices made by Todd Beamer, Jeffery Glick, Thomas Burnett Jr., and others aboard United Airlines Flight 93, Sept 11<sup>th</sup>, 2001.
- The terrorists planned to crash the plane into the U.S. Capitol



Todd Beamer



# Water program

- Our greatest strength is our greatest weakness...our success





# Human Nature

- You don't know what you have until you don't have it.



Hurricane Katrina: we can't  
predict...but, we can prepare



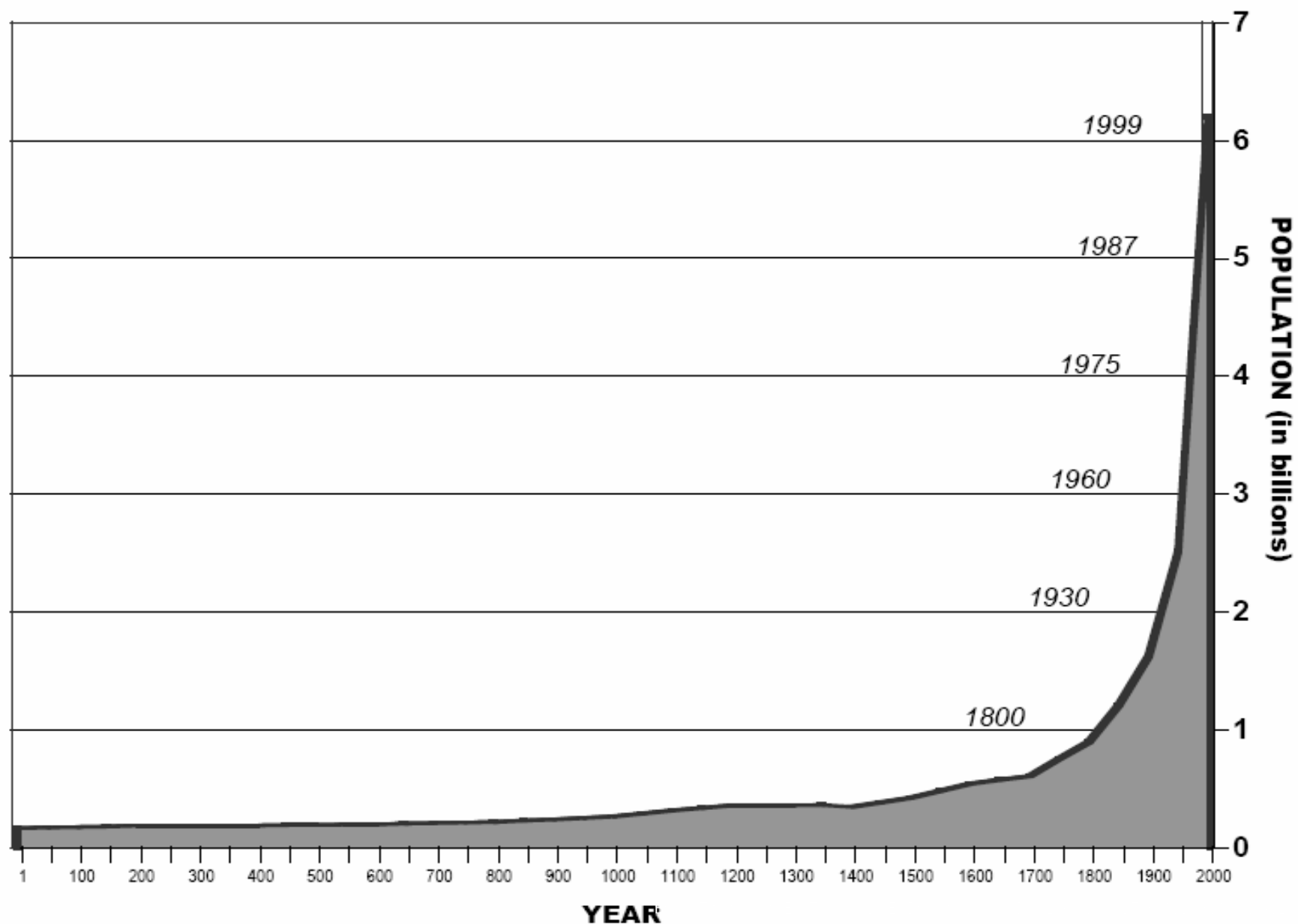
# Population

- MORE PEOPLE
- WHAT KIND OF PEOPLE ?





# Human Population Growth Since 1 A.D.



# ALL HAZARDS APPROACH

- Security should be pursued on an all hazards approach
- Malevolency, weather, juvenile delinquency, outages
- Dual use or purpose applications: e.g., SCADA / video / real time monitoring for operations and security/ peak shaving use of emergency generator



# Flu Pandemic

- Due to the construct of the world, an influenza pandemic is likely at some point in the future.





# Preparedness/Security = CIP 3

- Capital Improvement Plan
- Continuous Improvement Program
- Critical Infrastructure Protection



# Human Water Consumption

- 64 ounces of water per day recommended
- body is approximately 65 % water

# Water Security Elements

- (1) the purchase and installation of equipment for detection of intruders;
- (2) the purchase and installation of fencing, gating, lighting, or security cameras;
- (3) the tamper-proofing of manhole covers, pressure reducing valves, and remote facilities;
- (4) the re-keying of doors and locks;





# Water Security Elements (cont'd)

- (5) improvements to electronic, computer, or other automated systems and remote security systems;
- (6) participation in training programs, and the purchase of training manuals and guidance materials, relating to security against terrorist attacks;
- (7) improvements in the use, storage, or handling of various chemicals; and
- (8) security screening of employees or contractor support services.



# Water Security Elements (cont'd)

(9) Change practices, policies and procedures that would enhance security.



# Homeland Security Presidential Directive (HSPD) # 8...[12/17/03]

The term "first responder" refers to those individuals who in the early stages of an incident are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers as defined in section 2 of the Homeland Security Act of 2002 (6 U.S.C. 101), as well as emergency management, public health, clinical care, **public works**, and other skilled support personnel (such as equipment operators) that provide immediate support services during prevention, response, and recovery operations.





# Homeland Security Presidential Directive (HSPD) # 9...[1/30/04]

- "...This effort will include countermeasure research and development of new methods for detection, prevention technologies, agent characterization, and dose response relationships for high-consequence agents in the food and *the water supply*. (emphasis added) ..."



# TANS #27

To: Public Water and Wastewater Officials (TANS list)

Title: Threat Advisory Notification System [TANS] Notice # 27

Purpose: To Forward FEMA FY07 NIMS Compliance Metrics Fact Sheet and HSPD's # 5 & 8

1. The emergency preparedness programs of public utilities, drinking water and wastewater systems, should include awareness of and compliance with, as appropriate, the National Incident Management System (NIMS) of the Federal Emergency Management Agency (FEMA) of the US Department of Homeland Security (DHS).
2. The Michigan Department of State Police (MSP), along with local MSP districts/regions, will be working with your county local emergency planning coordinators (LEPC's) in implementing NIMS and ICS (Incident Command System) programs in your locales as a part of DHS funding and emergency management.
3. By way of background, Homeland Security Presidential Directives (HPSD) # 5 and 8 are attached. HSPD # 5 is titled Management of Domestic Incidents, and HSPD # 8 is titled National Preparedness.





# What is a Vulnerability Assessment?

- Vulnerability Assessments evaluate water and wastewater systems' susceptibility to potential threats and identify corrective actions that can reduce or mitigate the risk of serious consequences from adversarial actions.





# What is an Emergency Response Plan (ERP)

- An Emergency Response Plan is a process which describes actions, procedures and equipment which can prevent or significantly lessen the impact of terrorists' attacks or other malevolent acts on the wastewater system.



# TTX's/FTX's

- TTX's: Table top exercises
  - Put faces to names and develops local experience
  - Raises awareness of potential issues
- FTX's: Field training exercises
  - Equipment & personnel mobilized and used
- Suggest annual exercise
  - 'use it' or 'lose it' concept – commitment to emerg. response integrity



# TTX concept: Partnerships

- It's important to have as many partners at the table who understand the importance of the water system and are useful to assisting your system meet its mission.





# TTX concept: Uniforms

- First Responders, eg, Police and Fire Depts, will need to be used in the event of a terrorist act.
- Military, eg, the Michigan Army National Guard 51<sup>st</sup> Civil Support Team, are needed in the event of weapons of mass destruction (WMD) terrorist attack.



# TTX's Lessons Learned

1. CP/ERP: use to train EOC, staff, PD, FD
2. 800 megahertz radios allow comms
3. isolation/containment/investigation
4. 51<sup>st</sup> CST
5. Reverse 911 using GIS



# TTX's: lessons learned(cont'd)

6. public not as familiar w/ 'do not drink', 'do not use' notices as they are w/ 'boil water advisories'
7. The 'canary' is people on the distributed water





## MILITARY



## Weapons of Mass Destruction Civil Support Teams



In a commencement address at the U.S. Naval Academy in May 1998, President Bill Clinton announced that the nation would do more to protect its citizens against the growing threat of chemical and biological terrorism. As part of this effort, he said, the Department of Defense would form 10 teams to support state and local authorities in the event of an incident involving weapons of mass destruction.

The WMD Civil Support Teams were established to deploy rapidly to assist a local incident commander in determining the nature and extent of an attack or incident; provide expert technical advice on WMD response operations; and help identify and support the arrival of follow-on state and federal military response assets. They are joint units and, as such, can consist of both Army National Guard and Air National Guard personnel, with some of these units commanded by Air National Guard lieutenant colonels.

The mission of Weapons of Mass Destruction Civil Support Teams (WMD-CST) is to support local and state authorities at domestic WMD/NBC incident sites by identifying agents and substances, assessing current and projected consequences, advising on response measures, and assisting with requests for additional military support.

The WMD civil support teams are able to deploy rapidly, assist local first-responders in determining the nature of an attack, provide medical and technical advice, and pave the way for the identification and arrival of follow-on state and federal military response assets. They provide initial advice on what the agent may be, assist first responders in that detection assessment process, and are the first military responders on the ground, so that if additional federal resources are called into the situation, they can serve as an advance party that can liaise with the Joint Task Force Civil Support.

The units provide critical protection to the force, from the pre-deployment phase of an operation at Home Station through redeployment. They ensure that strategic national interests are protected against any enemy, foreign or domestic, attempting to employ chemical, biological, or radiological weapons - regardless the level of WMD/NBC threat. They are a key element of the Department of Defense's overall program to provide support to civil authorities in the event of an incident involving weapons of mass destruction in the United States.

They maintain the capability to mitigate the consequences of any WMD/NBC event, whether natural or man-made. They are experts in WMD effects and NBC defense operations.

These National Guard teams provide DoD's unique expertise and capabilities to assist state governors in preparing for and responding to chemical, biological, radiological or nuclear (CBRN) incidents as part of a state's emergency response structure. Each team consists of 22 highly skilled, full-time National Guard members who are federally resourced, trained and exercised, and employs federally approved CBRN response doctrine.

These units derive their origins in guidance from the US Congress which stated the need to "establish and equip small organizations in each of the 44 states not receiving initial RMD (Rapid Assessment and Initial Detection) element in 1999 to provide limited chemical/biological response capability"

## Units

- 1st WMD CST [MA NG] - Natick
- 2nd WMD CST [NY NG] - Scotia
- 3rd WMD CST [PA NG] - Annville
- [4th WMD CST](#) [GA DOD DOJ]
- 5th WMD CST [IL NG] - Bartonville
- [6th WMD CST](#) [TX NG]
- [7th WMD CST](#) [MO NG]
- [8th WMD CST](#) [CO NG]
- [9th WMD CST](#) [CA NG]
- 10th WMD CST [WA NG] - Tacoma
- [11th WMD CST](#) [ME NG]
- [13th WMD CST](#) [RI NG]
- 14th WMD CST [CT NG]
- 15th WMD CST [VT NG]
- 21st WMD CST [NJ NG]
- 22nd WMD CST [PR NG] - San Juan
- 23rd WMD CST [VI NG] - St Croix
- 31st WMD CST [DE NG]
- 32nd WMD CST [MD NG]
- 33rd WMD CST [DC NG]
- 34th WMD CST [VA NG] - Blackstone
- 35th WMD CST [WV NG] - St. Albans
- 41st WMD CST [KY NG] - Louisville
- [42nd WMD CST](#) [NC NG]
- 43rd WMD CST [SC NG] - Eastover
- 44th WMD CST [FL NG] - Starke
- 45th WMD CST [TN NG] - Smyrna
- 46th WMD CST [AL NG] - Montgomery
- 47th WMD CST [MS NG]
- [51st WMD CST](#) [MI NG] - Augusta
- [52nd WMD CST](#) [OH NG]
- 53rd WMD CST [IN NG]
- [54th WMD CST](#) [WI NG]
- 55th WMD CST [MN NG] - St Paul
- 61st WMD CST [AR NG] - Little Rock
- 62nd WMD CST [LA NG] - Carville
- [63rd WMD CST](#) [OK NG]
- 64th WMD CST [NM NG] - Santa Fe

Search globalsecurity.org for "Weapons of Mass Destruction Civil Support Teams"

# TTX: Lessons Learned: 51<sup>st</sup> Civil Support Team (CST)

- Michigan Army National Guard
- Augusta, MI
- Fort Custer
- ALL ERP's should have the 51<sup>st</sup> CST listed in event of terrorist attack
- <http://www.globalsecurity.org/military/agency/army/wmd-cst.htm>





# TTX: Lessons Learned: Michigan National Guard 51<sup>st</sup> WMD Civil Support Team

- Michigan National Guard
  - 51<sup>st</sup> Weapons of Mass Destruction (WMD) Civil Support Team
  - 2750 27<sup>th</sup> Street, Augusta, MI 49012 – 9205
  - Lt. Col. Clark D. Hinga, Commander
  - Cell: 269 420 3861 // direct line: 269 731 6531  
fax: 269 731 6449
  - Unit: 269 731 6522
  - E mail: [clark.hinga@mi.ngb.army.mil](mailto:clark.hinga@mi.ngb.army.mil)





# Initiatives

- VA CIP follow – up
- TTX-TTT
- Gaseous chlorine reduction
- TANS: Threat Advisory Emails



# Bath, Michigan Explosion

On May 18, 1927, Andrew Kehoe detonated 500 pound of dynamite at the Bath Community Consolidated Schools in mid-Michigan, **killing 37 children and 7 adults**. Fifty others were injured. **This was the worst act of terrorism in the United States until the Oklahoma City bombing.**





# Oklahoma City Bombing



On April 19<sup>TH</sup>, 1995, Timothy McVeigh parked a rented Ryder truck with explosives in front of the Alfred P. Murrah Federal Building complex and, at 9:02am, a massive explosion occurred which sheared the entire north side of the building, ***killing 168 people.***





# 2005 Water Security Congress: Oklahoma City



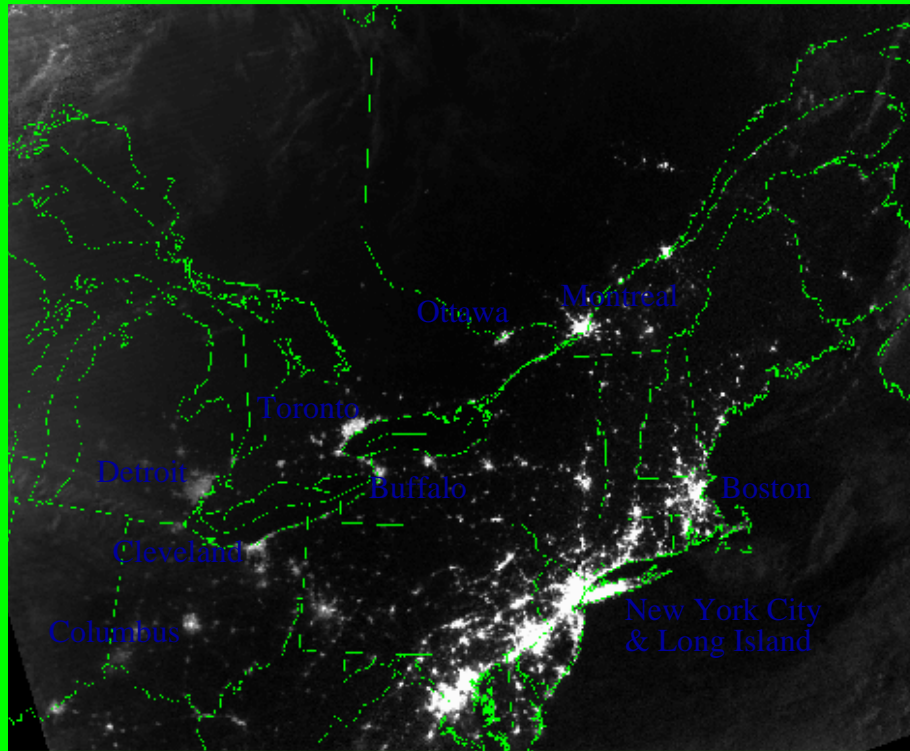
Oklahoma City National Memorial  
Site of Murrah Federal Building

- Concepts at the conference
  - Canaries
  - Technology
  - Relationships
  - Evolving
  - Real-Time Monitoring

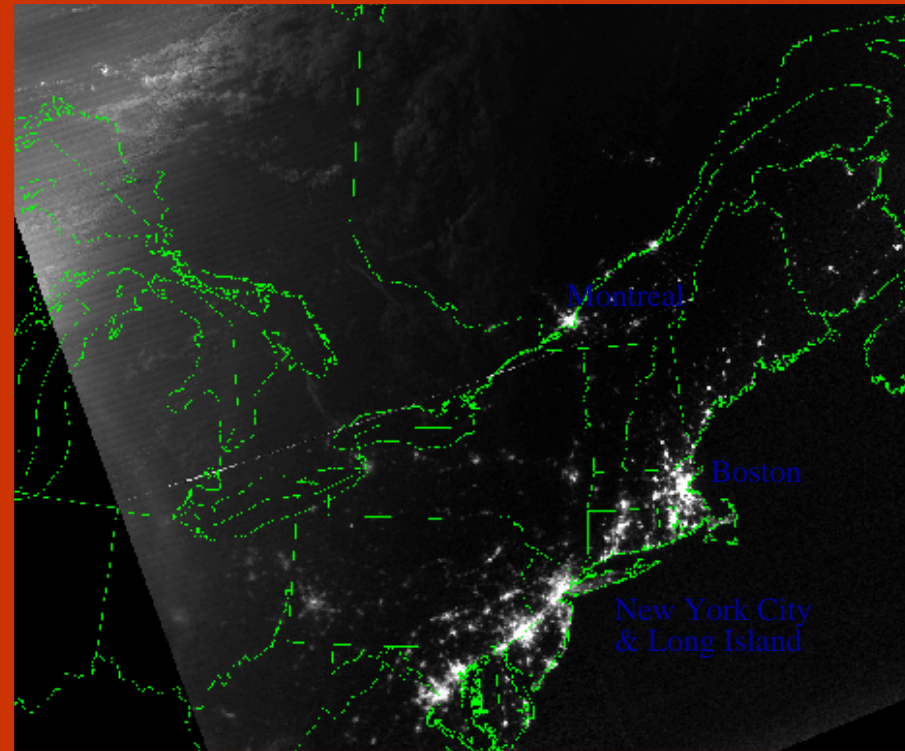


# BLACKOUT 2003 – August 14 ~ 4:15 PM EDT

August 13 – 8:29 PM  
~ 20 hours BEFORE



August 14 – 8:14 PM  
~ 4 hours AFTER






# Local actions are the most important

- During the power outage of August 2003, it wasn't the state or federal government that minimized the negative impact of the power outage...

It was the local utility and public safety officials who kept the services to the community going as best they could.







**I**gnorant men may sneer at the pretensions of sanitary science; weak and timorous men may hesitate to commit themselves to its principles, so large in their application; selfish men may shrink from the labor of change, which its recognition must entail; and wicked men may turn indifferently from considering that which concerns the health and happiness of millions of their fellow-creatures; but in the great objects which it proposes to itself, in the immense amelioration which it proffers to the physical, social, and indirectly, to the moral condition of an immense majority of our fellow-creatures, it transcends the importance of all other sciences; and in its beneficent operation, seems to embody the spirit, and to fulfil the intentions, of practical Christianity."\*

\*"Report on the Sanitary Condition of the City of London," p.38 by Dr. John Simon, Officer of Health, presented Nov. 6, 1849.

